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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/955,525	09/18/2001	Leonard Alan Collins	210817	8577

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EXAMINER

SHAW, PELING A

ART UNIT	PAPER NUMBER
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2144

DATE MAILED: 01/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/955,525

Applicant(s)

COLLINS, LEONARD ALAN

Examiner

Peling A. Shaw

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 09/25/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Priority

1. This application has no priority claim made. The effective filing date is September 18, 2001.

Specification Objections

2. There is no specific reference to the prior art mentioned in [0012] on page 4.
3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections – 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Srisuresh, et al., (U.S. Patent Number 6,058,431), hereinafter referred as Srisuresh.

- a. Regarding claim 1, Srisuresh disclosed (column 5, line 51-62, Fig. 2) a method for 1st computing device (PC 108a) to enable 2nd computing device (target host) to initiate a

traffic flow with 1st device by formulating and sending a message (datagram) to 2nd device.

- b. Regarding claim 2, Srisuresh disclosed (column 5, line 61-62) formulating a message by writing the public address of 2nd device (198.76.28.4) in the message.
- c. Regarding claim 3, Srisuresh disclosed (column 5, line 63-67) formulating a message to 2nd device behind the NAT by writing a public address of NAT (198.76.29.1) in the message.
- d. Regarding claim 11, Srisuresh disclosed (column 8, line 49-53, Fig. 6) a computer-readable medium having instructions for performing the method of claim 1.

Srisuresh disclosed all limitations of claims 1-3 and 11. Claims 1-3 and 11 are rejected under 35 U.S.C. 102(b).

5. Claims 12-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Boyle, Steven C. et al., (U.S. Patent Application Publication 20030018912 A1), hereinafter referred as Boyle.

- a. Regarding claim 12, Boyle disclosed ([0027], [0028], [0030], Fig. 3) a directory service (External manager 20 with directory table 22) to facilitate direct communications between 1st device and 2nd device that the directory service receives from 1st device and identifies to 2nd device (has an IP/UDP entry in directory table 22) that 1st device's wish to communicate with the 2nd device (call request/call notification), receives from the 2nd device and identifies to 1st device that 2nd device wish to communicate with 1st device (External manager then notifies PC 10 that it can now use this window to send UDP packets back to PC12.).

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- b. Regarding claim 13, Boyle disclosed ([0040]) 1st device identifying the port to 2nd device to be used in communication (This call notification includes the UDP port of the calling party.).
- c. Regarding claim 14, Boyle disclosed ([0025], Fig. 3) the directory service identifying the public network address of 2nd device to 1st device (the case the Firewall 18 does not exit.).
- d. Regarding claim 15, Boyle disclosed ([0025], Fig. 3) the directory service identifying the public network address of NAT before 2nd device to 1st device (the case the Firewall 18 does exit.).
- e. Regarding claim 16, Boyle disclosed ([0059]-[0064], Fig. 7) a computer-readable medium having instructions for performing the method of claim 12.

Boyle disclosed all limitations of claims 12-16. Claims 12-16 are rejected under 35 U.S.C. 102(e).

6. Claims 17-21 and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Sridhar, et al., (U.S. Patent Number 6,324,582), hereinafter referred as Sridhar.

- a. Regarding claim 17, Sridhar disclosed (column 34, line 40-41, 55-56, column 35, 1-8, Fig. 24 and 25) a method of 1st device (1510 or 1451) enabling 2nd device (host A1.B.C) to initiate a traffic flow with 1st device by requesting and receiving 2nd device identity of a directory service (2424), formulating and sending a message to 2nd device with returned identify of 2nd device (1.2.3.20).
- b. Regarding claim 18, Sridhar disclosed (column 35, 1-8) that a public network address (1.2.3.20) of 2nd device is returned from the directory service (2424).

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- c. Regarding claim 19, Sridhar disclosed (column 33, line 6-27, Fig. 23) that a public network address of NAT (2310) before 2nd device is returned from the directory service.
- d. Regarding claim 20, Sridhar disclosed (column 35, line 23-25) that a public network address of 2nd device (1.2.3.20) is used to formulating the message.
- e. Regarding claim 21, Sridhar disclosed (column 33, line 13-20) that a public network address of NAT (a network address to which NAT 2310 responds) before 2nd device is used to formulating the message.
- f. Regarding claim 27, Sridhar disclosed (column 8, line 24-38, Fig. 9, 9a, 15, 16 and 26) a computer-readable medium having instructions for performing the method of claim 17.

Sridhar disclosed all limitations of claims 17-21 and 27. Claims 17-21 and 27 are rejected under 35 U.S.C. 102(e).

Claim Rejections – 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Srisuresh, et al., (U.S. Patent Number 6,058,431), hereinafter referred as Srisuresh as applied to claim 1 in item a, paragraph 4 above, in view of Boyle, Steven C. et al., (U.S. Patent Application Publication 20030018912 A1), hereinafter referred as Boyle.

As quoted from item a, paragraph 4, Srisuresh disclosed (column 5, line 51-62, Fig. 2) a method for 1st computing device (PC 108a) to enable 2nd computing device (target host) to initiate a traffic flow with 1st device by formulating and sending a message (datagram) to 2nd device.

- a. Regarding claims 4, Srisuresh did not disclose formulating a message with Null content field (null packet). Boyle disclosed (Fig. 8, [0043] and [0047]) formulating a message with Null content field (null packet). It would be obvious to one of ordinary skill in the art at the time of the invention was made to modify the method of Srisuresh with the teaching of Boyle in specifying the message as with a Null content field.
- b. Regarding claim 5, Srisuresh did not disclose setting timer on sending message, and sending a follow-up message on timer expiration. Boyle disclosed ([0029]) setting

timer on sending message, and sending a follow-up message on timer expiration (send a keep alive packet). It would be obvious to one of ordinary skill in the art at the time of the invention was made to modify the method of Srisuresh with the teaching of Boyle in setting up a timer in sending the message, and send a follow-up message on timer expiration.

- c. Regarding claim 6, Srisuresh did not disclose a delay of a timer as per claim 5 depends upon the protocol type used in the sending step. Boyle disclosed further ([007], [0027], [0029], [0053], [0054], [0069], [0078]) a delay of a timer as per claim 5 depends upon the protocol type (TCP and UDP connections) used in the sending step. It would be obvious to one of ordinary skill in the art at the time of the invention was made to modify the method of Srisuresh with the teaching of Boyle as per claim 5 and here in which a delay of a timer as per claim 5 depends upon the protocol type used in the sending step.
- d. Regarding claim 7, Srisuresh did not disclose discovering the identity of 2nd device as a device with which 1st device wishes to communicate. Boyle disclosed ([0027]) discovering the identity of 2nd device as a device with which 1st device wishes to communicate (External manager 20 registers each PC by storing addresses and ports for the PCs in directory table 22). It would be obvious to one of ordinary skill in the art at the time of the invention was made to modify the method of Srisuresh with the teaching of Boyle in discovering the identity of 2nd device as a device with which 1st device wishes to communicate.

- e. Regarding claim 8, Srisuresh did not disclose specifying the identity of 1st device and the communication type to be used for communication during the discovery as per claim 7. Boyle disclosed ([0039], [0040]) specifying the identity of 1st device and the communication type to be used for communication during the discovery (call-setup request, call notification including UDP port and IP address) as per claim 7. It would be obvious to one of ordinary skill in the art at the time of the invention was made to modify the method of Srisuresh with the teaching of Boyle in specifying the identity of 1st device and the communication type to be used for communication during the discovery as per claim 7.
- f. Regarding claim 9, Srisuresh did not disclose choosing a port number, associating the port number with the message, and communicating the port number to 2nd device. Boyle disclosed ([0039], [0040]) choosing a port number (UDP port of the calling part), associating the port number with the message (call-setup request), and communicating the port number to 2nd device (call notification including UDP port of calling part). It would be obvious to one of ordinary skill in the art at the time of the invention was made to modify the method of Srisuresh with the teaching of Boyle in choosing a port number, associating the port number with the message, and communicating the port number to 2nd device.
- g. Regarding claim 10, Srisuresh did not disclose in addition to per claim 9 setting timer on sending message, upon expiration choosing 2nd port, associating the port with a follow-up message, communicating the port to 2nd device, sending the follow-up message with the port to 2nd device. Boyle disclosed ([0078]) setting timer on

sending message (PC 12 periodically open a connection to external manager), upon expiration choosing 2nd port (a list of alternate UPD ports), associating the port with a follow-up message (periodically open a connection), communicating the port to 2nd device (external manager), sending the follow-up message with the port to 2nd device (external manager.). It would be obvious to one of ordinary skill in the art at the time of the invention was made to modify the method of Srisuresh with the teaching of Boyle per claim 9 and here, setting timer on sending message (TCP connection if not sending keep alive packets in both TCP and UDP connections), upon expiration choosing 2nd port (alternate UDP port), associating the port with a follow-up message (call-setup request), communicating the port to 2nd device (call notification including UDP port of calling party), sending the follow-up message with the port to 2nd device (call notification including UDP port of calling party).

Together Srisuresh and Boyle disclosed all limitations of claims 4-10. Claims 4-10 are rejected under 35 U.S.C. 103(a).

8. Claims 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sridhar, et al., (U.S. Patent Number 6,324,582), hereinafter referred as Sridhar as applied to claims 17 in paragraph 6.a above, and further in view of Boyle, Steven C. et al., (U.S. Patent Application Publication 20030018912 A1), hereinafter referred as Boyle.

Sridhar disclosed (column 34, line 40-41, 55-56, column 35, 1-8, Fig. 24 and 25) a method of 1st device (1510 or 1451) enabling 2nd device (host A1.B.C) to initiate a traffic flow with 1st device by requesting and receiving 2nd device identity of a directory service (2424),

formulating and sending a message to 2nd device with returned identify of 2nd device

(1.2.3.20).

- a. Regarding claims 22, Sridhar did not disclose formulating a message with Null content field (null packet). Boyle disclosed (Fig. 8, [0043] and [0047]) formulating a message with Null content field (null packet). It would be obvious to one of ordinary skill in the art at the time of the invention was made to modify the method of Sridhar with the teaching of Boyle in specifying the message as with a Null content field.
- b. Regarding claim 23, Sridhar did not disclose setting timer on sending message, and sending a follow-up message on timer expiration. Boyle disclosed ([0029]) setting timer on sending message, and sending a follow-up message on timer expiration (send a keep alive packet). It would be obvious to one of ordinary skill in the art at the time of the invention was made to modify the method of Sridhar with the teaching of Boyle in setting up a timer in sending the message, and send a follow-up message on timer expiration.
- c. Regarding claim 24, Sridhar did not disclose a delay of a timer as per claim 23 depends upon the protocol type used in the sending step. Boyle disclosed further ([007], [0027], [0029], [0053], [0054], [0069], [0078]) a delay of a timer as per claim 23 depends upon the protocol type (TCP and UDP connections) used in the sending step. It would be obvious to one of ordinary skill in the art at the time of the invention was made to modify the method of Sridhar with the teaching of Boyle as per claim 23 and here in which a delay of a timer as per claim 23 depends upon the protocol type used in the sending step.

- d. Regarding claim 25, Sridhar did not disclose choosing a port number, associating the port number with the message, and communicating the port number to 2nd device. Boyle disclosed ([0039], [0040]) choosing a port number (UDP port of the calling part), associating the port number with the message (call-setup request), and communicating the port number to 2nd device (call notification including UDP port of calling part). It would be obvious to one of ordinary skill in the art at the time of the invention was made to modify the method of Sridhar with the teaching of Boyle in choosing a port number, associating the port number with the message, and communicating the port number to 2nd device.
- e. Regarding claim 26, Sridhar did not disclose in addition to per claim 25 setting timer on sending message, upon expiration choosing 2nd port, associating the port with a follow-up message, communicating the port to 2nd device, sending the follow-up message with the port to 2nd device. Boyle disclosed ([0078]) setting timer on sending message (PC 12 periodically open a connection to external manager), upon expiration choosing 2nd port (a list of alternate UPD ports), associating the port with a follow-up message (periodically open a connection), communicating the port to 2nd device (external manager), sending the follow-up message with the port to 2nd device (external manager.). It would be obvious to one of ordinary skill in the art at the time of the invention was made to modify the method of Sridhar with the teaching of Boyle per claim 25 and here, setting timer on sending message (TCP connection if not sending keep alive packets in both TCP and UDP connections), upon expiration choosing 2nd port (alternate UDP port), associating the port with a follow-up

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message (call-setup request), communicating the port to 2nd device (call notification including UDP port of calling party), sending the follow-up message with the port to 2nd device (call notification including UDP port of calling party).

Together Sridhar and Boyle disclosed all limitations of claims 22-26. Claims 22-26 are rejected under 35 U.S.C. 103(a).

Conclusion


9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Refer to the enclosed PTO-892 for details.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peling A. Shaw whose telephone number is (571) 272-7968. The examiner can normally be reached on M-F 8:00 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William A. Cuchlinski can be reached on (571) 272-3925. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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